

### EQUATION 3 — GROUP R OCCUPANCY PROPOSED UA

$$UA = U_W A_W + U_{BGW} A_{BGW} + U_{VG} A_{VG} + U_{OG} A_{OG} + U_F A_F + U_{RC} A_{RC} + U_{CC} A_{CC} + U_D A_D + F_S P_S$$

**Where:**

$UA$	=	the combined thermal transmittance of the gross exterior wall, floor and roof/ceiling assembly area.
$U_W$	=	the thermal transmittance of the opaque wall area.
$A_W$	=	opaque wall area.
$U_{BGW}$	=	the thermal transmittance value of the below grade opaque wall area.
$A_{BGW}$	=	opaque below grade wall area.
$U_{VG}$	=	the thermal transmittance value of the vertical glazing area.
$A_{VG}$	=	vertical glazing area, including windows in exterior doors.
$U_{OG}$	=	the thermal transmittance value of the overhead glazing area.
$A_{OG}$	=	overhead glazing area.
$U_F$	=	the thermal transmittance of the floor area.
$A_F$	=	floor area over unconditioned space.
$U_{RC}$	=	the thermal transmittance of the roof/ceiling area.
$A_{RC}$	=	roof/ceiling area.
$U_{CC}$	=	the thermal transmittance of the cathedral ceiling area.
$A_{CC}$	=	cathedral ceiling area.
$U_D$	=	the thermal transmittance value of the opaque door area.
$A_D$	=	opaque door area.
$F_S$	=	concrete slab component F-factor.
$P_S$	=	lineal ft. of concrete slab perimeter.

**NOTE:** Where more than one type of wall, window, roof/ceiling, door and skylight is used, the U and A terms for those items shall be expanded into sub-elements as:

$$U_{W1} A_{W1} + U_{W2} A_{W2} + U_{W3} A_{W3} + \dots \text{etc.}$$